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ABSTRACT

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BEGINNING SPELLING: A REVIEW OF SIX SPELLING SERIES[1]

bruce Cronnell

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To better understand how spelling is taught, six commercial spelling series were reviewed in terms of linguistic orientation, conception of spelling, and treatment of spelling for instruction. In addition, the spelling content of each series through fourth grade was described. Comparisions were made among the series in terms of specific aspects considered important to successful spelling instruction. While there is a common content in all series, they differ considerably in their treatment of this content and in the additional material presented, resulting in a range from very good to poor in their apparent effectiveness in providing a basis for learning the sound-to-spelling correspondences of English.

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BEGINNING SPELLING: A REVIEW OF SIX SPELLING SERIES

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Section I

Review of Spelling Series

The Rules of Correspondence activity is engaged in designing a spelling component for SWRL's Model 2 Communication Skills Program. In order to better understand how spelling is presently taught, six commercial spelling series were reviewed and comparisons were made among them. These reviews were concerned with content and, to a lesser degree, method. This paper presents the results of this study, in the hopes that a better understanding of spelling will provide a more sophisticated basis for the design and development of spelling instruction.

General Procedures

Six spelling series were selected for review on the basis of their popularity and their particular treatment of spelling. Each series was reviewed through the fourth grade level, since this range best approximates the concerns of the SWRL K-3 Communication Skills Program.

Spelling (at least in the beginning stages) consists of putting in writing words which can be spoken, that is, of moving from sound to writing. Since the basis for spelling is speech, it is important that spelling instruction have an adequate linguistic base, in which the nature of speech and the nature of orthography are recognized, as well as the relations between them. An adequate linguistic orientation requires understanding of the nature of English sound-to-spelling correspondences, knowledge of regularities and exceptions in English spelling, and recognition of dialect differences which may affect spelling performance. Since English spelling is primarily rule-based (Hanna, Hanna, Hodges, & Rudorf, 1966), spelling instruction should provide for learning and transfer of the spelling rules appropriate for written communication. However, since English spelling does not have a perfect relation with speech, adequate instruction should also provide for learning to handle the variability in English spelling, including use of the dictionary as an aid to spelling. Thus a major part of each review is concerned with the series' linguistic orientation, conception of spelling, and treatment of spelling for instruction, although little emphasis has been placed on pedagogy except in terms of sound-to-spelling correspondences.

The reviews are also concerned with the specific spelling content of each series. Each correspondence, skill, etc., is listed by the year of its first occurrence, although it may be reviewed and/or expanded later. Sound-to-spelling correspondences are given in the forms used by the Rules of Correspondence activity, as listed and exemplified in the Appendix. Since these correspondences often depend

on environment within a word for their application, environments are listed in the reviews to indicate the scope of the correspondences. However, only explicitly stated enviornments are so taught; those in parentheses are not taught, but are given to clarify correspondences.

Page references are for the specific series being reviewed. For these references, the number or letter before the colon indicates the book, while the number following the colon indicates the page. A "T" before the page number indicates a page in the teacher's edition. (For example, 2: T84 indicates page 84 in the teacher's edition of Book 2.)

Reviews

The Economy Spelling Series, *Spelling Growth*

The series reviewed here is:

Mason, C.C., Hudson, J.S., Andress, Barbara., & Miller, Jayne. *A phonetic approach to spelling growth.* Oklahoma City: The Economy Company, 1967.

All four authors are involved in Book 1 only; the remaining books are written by Mason and Hudson alone.

The teacher

The Economy series is teacher-directed; even in Book 4, when spelling generalizations are given in the pupil's book, the emphasis is on the teacher instructing the class. There are extensive teacher's notes, nearly equaling the number of lesson pages in the pupil's edition. The teacher is told everything to do and how to explain everything to the students. The following is a typical paragraph in the teacher's editions (4: T42-43), with only the first few words of each sentence to indicate the extensive instructions:

> Tell the pupils....
> Pronounce bottle.
> Help pupils determine that....
> Ask....
> Ask... and write....
> Ask....
> Ask... and write....
> Ask... and write....
> Pronounce... and ask....
> Remind....
> Let them look....
> Write....
> Ask....
> Present all spelling words... in a similar way.

While the teacher is given detailed instructions on how to teach, she is given little information of a linguistic nature about what is to be taught.

Linguistic orientation

Discrimination and identification of sounds are emphasized in the Economy series. These are clearly useful skills for spelling; however, considerable and unreasonable demands are placed on both teachers and students.

When each sound or sound combination is presented or reviewed for spelling, pupils are asked to identify words containing the sound; e.g., "underline the pictured objects whose names end with the t sound" (1: T21). They are also asked to tell what sounds they hear in specific positions. If the teacher stimulus (e.g., "the t sound," above) or the pupil response is to be a consonant sound, a difficult task is presented because of the problems involved in pronouncing consonants in isolation (cf, Russell & Pfaff, 1969a, b). This task is greatly complicated when consonant clusters are involved; e.g., "ask the children to name the final sound [sic;/ks/is the answer] in makes..."; "ask which word contains the sound [sic] of ks" (1: T93).

However, it is not clear how teachers and pupils are actually supposed to pronounce these sounds, as the teacher's edition gives no instructions in this matter. While the Economy series generally does not confuse reading and spelling, it is conceivable that by "sounds" nothing more than letter names is meant. And in lieu of any explanation, it would certainly not be surprising if teachers interpreted "sounds" in this way. The printing of the teacher's notes does not distinguish between spelling and sound; e.g., "the sound of t is spelled with the letter t" (1: T21). Although the series is far from clear on this point, possible confusion of sounds and letters seems very real.

If sounds and letters are not confused, then it is asking a great deal to expect the pronunciation of individual sounds. However, the series in general demands unnatural pronunciation, or at least pronunciations not natural to many dialects. Certain required pronunciations are not those found in normal speech; e.g., "make sure they hear three syllables in every" (2: T85).

In addition to unnatural pronunciations, pronunciation (and hearing) is presented according to some unspecified dialect. The authors Mason and Hudson are in the Tulsa, Oklahoma, public schools, but the dialect does not seem to be regional. Instead it appears to be based on Merriam-Webster dictionaries. The "guide to pronunciation" (inside front cover, teacher's editions) uses symbols from "*Webster's Elementary Dictionary, A Dictionary for Boys and Girls*, copyright 1969 by G. & C. Merriam Company." These symbols overdifferentiate sounds; e.g., the sounds of the underlined letters in the following words are each symbolized differently: alone, camel, pencil, carrot, and circus, although the same sound is found in each ([ə], schwa). Such overdifferentiation of sounds caused problems for the sound-to-spelling analysis of Hanna, Hanna, Hodges, and Rudorf (1966), as indicated in that report and in Cronnell (1970c).

Some differentiation is appropriate for certain dialects, although not for all. For example, in some dialects four (vowel symbolized by ō in the series) and for (symbolized by ô) are pronounced differently, but this is not true for probably a majority of Americans. However, the Economy series makes no comment on the possibility of dialect variation, even for such common variables as [hw]--[w] (e.g., whale--

wail), [ɔ]--[a] (e.g., caught--cot), where the first member of each pair is taught as if found in all dialects.[2] Another dialect problem is the variation between [u] and [yu] in many words (e.g., tune [tun] or [tyun]).[3] In spite of the fact that the sounds vary considerably among dialects and spellings of these sounds are generally not predictable, the series insists on specific dialect-governed pronunciations, e.g., "Be sure to say [yu] (not [u]) in new" (2: T48). This must be confusing for teachers and children who say [nu] (see Kenyon & Knott, 1953).

Review

There is considerable review in the Economy series, both within and between books. Review of content of previous books is not indicated as such; instead it is presented as if new, often in conjunction with actual new material. In the "purpose" section, intra-book review is stated as "Review X," while inter-book review is stated as "Teach X." Teachers at a specific grade level are given no idea of what children should have mastered (or at least been taught) in previous years.

In addition to regular review lessons, in Books 2 and 3 there is a "special review section." This is a programmed-instruction section for individual use (although it appears that all children are expected to use it). In Books 2 and 3, it is the only place where explicit statements about spelling are made in the pupil's editions.

Number of words

Each year (after Book 1) there is some repetition of words used in previous years, exclusive of those designated as "review words."[4]

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[2]In one notable case dialect is indicated, although "backwards" for most Americans. The words fast and last, for example, are given with the pronunciation [a], although the teacher is told to use [æ] if "usual in the community" (2: T74). However, [æ] is the most common pronunciation for these words, except in eastern New England, where [a] is found (Kenyon & Knott, 1953). Cecil L. Brown (personal communication) suggests that [a] is a learned pronunciation, used to avoid the regionalism [æə] (from [æ]), which is scorned by speakers of other dialects.

[3]The authors do not seem to realize that the sound [u] (dictionary symbol o͞o) is included in the sound [yu] (dictionary symbol ū); thus they ask that [u] words only be picked out of a list also containing [yu] words "to sharpen the ability to hear subtle differences" (2: T54).

[4]Words from preceding books, chosen on the basis of "various studies of words most frequently misspelled" (3: T95).

Book	Basic words	Words for skill development[5]	Total	
1	142	---	142	
2	274	196	470	
3	365	211	576	(plus 59 "review words"[6] and 87 "supplementary words"[6])
4	454	458	912	(plus 60 "review words"[6] and 105 "supplementary words"[6])

Content

It is difficult to precisely determine the content of the Economy series, for several reasons. Except in Book 1, there is no table of contents. Since review and new materials are not clearly separated, it is not easy to determine what is being presented for the first time. The only way to determine content definitely is to read through the teacher's notes to see what is taught, and the volume and tedious detail of these notes makes reading them a most difficult task. In addition, spelling content is passed over very quickly (e.g., when teaching igh, all that is said in three pages of teacher's notes and two pages of pupil's text is "Pronounce sigh and explain that igh sometimes spells the sound of ī at the end of a word," 2: T23, 24), while unimportant matters are treated in detail (e.g., "Tell the pupils to place a check mark (✓) beside 1 on the colored strip to show that they have completed all work in the first group of exercises," 2: T24).

Nonetheless, in the following sections is an attempt to list the spelling content of the Economy series (not in order of presentation). There is a great deal of material covered in Books 1-4, providing a thorough foundation in English spelling provided that it can be taught and learned. The spelling generalizations are accurate and well sequenced. There are some transfer exercises, but no transfer tests.

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[5]Words not on basic spelling list for each lesson.

[6]From a separate pamphlet. The words "are designed to provide additional practice in applying the spelling principles taught in the *Spelling growth* series. They also provide a program of vocabulary enrichment. They may be used with students who quickly learn the basic words... and need further challenge" (Supplementary word list, p. 2).

Content of Book 1

Consonants and vowels are mixed throughout Book 1, but are presented separately here for convenience.

[b] → b	[h] → h	[n] → n	[v] → v
[d] → d	[ǰ] → j	[p] → p	[w] → w
[f] → f	[l] → l	[r] → r	[ks] → x
[g] → g	[m] → m	[t] → t	[y] → y

[s] → s (#__, __#, -s)
[z] → z
[z] → s (__#, V__e#, -s)

[k] → k /__ {e, i}
[k] → k (C__#, V__e#)
[k] → c /__ {a, o, u}

[kw] → qu

[æ] → a	[ɛ] → e	[ɪ] → i	[ɑ] → o	[ə] → u
[e] → ai	[i] → ee	[i] → ea	[o] → oa	

[e] → a...e /__[C#]
[o] → o...e /__[C#]
[ay] → i...e /__[C#]
[(y)u] → u...e /__[C#]

Suffix: -s

Content of Book 2

Ø → e/v__#

[k] → ck /[V̆]__#
[k] → ch /s__ (in one word only)

[f] → ff / [V̆]__#
[l] → ll / [V̆]__#
[s] → ss / [V̆]__#

[š] → sh	[č] → ch
[hw] → wh	
[ŋ] → ng	[ŋ] → n /__k
{[θ], [ð]} → th	

[s] → se [s] → ce
[z] → ze

[n] → kn

[e] → ay /__#

[i] → e /__#

[ay] → ie
[ay] → y /__# [ay] → igh /__# [aynd] → ind

[o] → o /__# [o] → ow /__#
[o] → ou (e.g., four; this is rare)
[old] → old

[(y)u] → ew [(y)u] → ue
[u] → oo

[ɛ] → ea

[a] → a /w__

[ə] → o...e (e.g., love)

[u] → oo [ʊ] → oul (e.g., could) [ʊ] → u

[aw] → ow /__ $\left(\begin{smallmatrix}l\\n\end{smallmatrix}\right)$# [aw] → ou (elsewhere)

[oy] → oy /__# [oy] → oi (elsewhere)

[ɔ] → o [ɔ] → aw /__# [ɔl] → all

[or] → or
[ar] → ar
[ɪr] → ear [ɪr] → eer [ɪr] → ere
[ɛr] → air [ɛr] → ear [ɛr] → are [ɛr] → ere

[ər] → er [ər] → ur [ər] → ir
[ər] → or /w__

[əl] → le [ən] → en
[i] → y /__#
[ə] → a /#__

[C] → CC /[V̆]__[V]

Suffix: -ing
Suffixation: ∉ + es (i.e., drop the e and add es; 2: T78), ∉ + ing

Other
Syllabication
Compounds

Content of Book 3

Little new spelling rule content is introduced in Book 3. Much emphasis is placed on stress and on syllable division. Words are spelled by syllables and pronunciation symbols are used.

[ǰ] → ge

[č] → tch /[v̆]__

[čər], [čur] → ture

[r] → wr

[ayld] → ild

[o] → o (e.g., most)*

[i] → ie

[u] → ou (e.g., you)

[ɔ] → au (e.g., taught) [ɔk] → alk

[or] → ar /w__

[e] → eigh [e] → ea (e.g., great)

[ə] → ou (e.g., young)

[ɔl] → al-
[bi] → be-

Suffixes: -ed, -ly
Suffixation: e + ed; y → i + es/ed

Other
  Contractions
  Abbreviations

Content of Book 4

In Book 4, sound-to-spelling correspondences are stated explicitly in the pupil's text. Thus much earlier work is reviewed and stated.

[e] → a /__... [i] → e /__... [ay] → i /__...
[o] → o /__... [(y)u] → u /__...

[u] → o /__v (e.g., move)

[i] → ei

[ə] → a, e, i, o, u (unstressed)

[šən] → tion
[tɪn], [tn̩] → tain
[ɪǰ] → age

[ər] → ar, or, ur (unstressed)

[ǰ] → g [ǰ] → dge /[V̆]__

[f] → gh [f] → ph

[s] → c

Affixes

Suffixes: -es, -er, -'s

Other
Capitalization
Hyphenated compounds

The Follett Spelling Series, *Spelling and Writing Patterns*

The series reviewed here is:

> Botel, M., Holsclaw, C., Cammarota, G., & Brothers, A. *Writing and spelling patterns*. Chicago: Follett Publishing Company, 1968.

This series has six books, A-F, covering grades 1-6. Books B-F in the hard-bound edition are titled *Patterns in spelling and writing*.

Spelling patterns

Spelling is taught by use of patterns, rather than rules or generalizations. Four types of spelling patterns are used "to help pupils explore structure in words and to help build sound-letter relationships...:

1. rhyming: cat, hat, sat, etc.;
2. beginning letter and sound similarities: cab, cat, can, etc.;
3. beginning and ending letter and sound similarities: cat, cot, cut;
4. short and long vowel contrasts: mad-made, hop-hope, etc."

(A: T insert D).

The use of patterns emphasizes a whole-word approach: "Pupils always work with a total word, not individual letter names" (A: T9) and teachers are warned to avoid "overanalysis of sounds and letters as well as abstract language labels [e.g., "vowel"]" (A: T37).[7] The emphasis on whole words is valuable, in that words are the functional language elements which children must spell. However, the lack of emphasis on individual sound-letter relationships may make transfer (which is not tested) difficult.

In teaching these spelling patterns, there is no linguistic information indicated for the teacher.

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[7]Labels are allowed in Book C, where they are required for grammar study.

Techniques

Two techniques for learning to spell are employed in the Follett series: mastery and discovery. The "mastery technique" is used to learn the spelling of all program words and consists of three steps, each to be accompanied by saying the whole word: (1) study and trace, (2) copy and compare, and (3) cover, write, and compare. In this method, there is no concern with directly connecting sound and spelling; instead a whole-word memorization process is encouraged.

The "discovery technique" is "an inductive language approach," which "encourages pupils to think as they explore language and make discoveries about word patterns" (A: T insert B). Essentially this technique consists of giving sample words with certain letters noted (e.g., h<u>ow</u>, cl<u>own</u>) and instructing the pupil to write additional words with the pattern (e.g., <u>down</u>, <u>now</u>). As far as this goes, it is the only real emphasis on spelling patterns (but with little concern for the sounds to be spelled).

A perhaps more important technique, especially after Book A, is testing, as can be seen from the following suggested weekly schedules:

Book B:	Wednesday:	self-test
	Friday:	final test (B: T insert C)
Book C:	Monday:	pretest
	Thursday:	self-test and sentence patterning
	Friday:	final test (C: T insert D)
Book D:	Monday:	pretest
	Thursday:	self-test
	Friday:	final test (D: T insert D)

As can be noted here and will be noted in the following sections, little time is allotted for spelling instruction <u>per se</u>.

Writing patterns

As the title of the series suggests, the Follett series is concerned with writing as well as spelling. In fact, the concern with writing (i.e., descriptive writing and grammar) often seems to be nearly as important as spelling. From 1/5 to 2/5 of the time (one to two days) is devoted to writing activities. These activities include the following:

a. unmixing jumbled sentences (e.g., <u>mule road a is the in</u> → <u>A mule is in the road</u>, B: 42);

b. adding words to sentences (e.g., The steps are strong → The green steps are strong → The green steps are strong and high, C: 70);

c. filling words in patterns (e.g., He----me home, A: 79);

d. paragraph and letter writing (Books C and D contain special sections for such "Written expression").

Since the concern of this review is not with grammar and writing, these aspects of the Follett series will not be evaluated. However, it should be noted that as a result of these concerns with writing and testing (as noted above), actual instruction in spelling plays a relatively insignificant role in the series.

Number of words

These figures are for "basic program words," which are tested, and do not include words used in the various exercises. For Books B-D, a number for "total words" is indicated in parentheses; this includes words in the review sections, many of which are introduced in earlier books (cf, inside front and back covers of all books).

Book A 190 words

Book B 240 words (312 total words)

Book C 600 words (708 total words)

Book D 600 words (708 total words)

Content of Book A

Because of the use of spelling patterns (as discussed above), it is sometimes difficult to know just what sound-to-spelling correspondences are taught. Those involving one letter are only taught in patterns, although they are listed below as individual rules. Those with two or more letters are more clearly noted in the series. The following correspondences found in Book A are not ordered.

[b] → b	[h] → h	[n] → n	[t] → t
[d] → d	[j] → j	[p] → p	[v] → v
[f] → f	[l] → l	[r] → r	[w] → w
[g] → g	[m] → m	[s] → s	[y] → y

[k] → c (/__ {a, o, u})

[k] → k (/__{i e})

[k] → k (/[V̄]__#; [V̄] = V...e)
[k] → ck (/[V̆]__#)

These two correspondences are contrasted in patterns, e.g., back-bake; lick-like, (A: 62).

[š] → sh

[č] → ch

[w], [hw] → wh (no dialect differences noted)

{[θ] [ð]} → th

[ŋ] → ng [ŋ] → n /__k

[l] → ll
[s] → ss

[æ] → a [ɛ] → e [ɪ] → i [ɑ] → o [ə] → u

[e] → a...e [ay] → i...e

[i] → ee [i] → ea [e] → ay

[u] → oo [ʊ] → oo

[ar] → ar [or] → or [ər] → ir

[aw] → ow [aw] → ou

[oy] → oy

[old] → old [ɔll] → all

[ay] → igh (Exercises A: 109, but no words on word list)

Suffixes: -s, -ed, -ing

Other
Syllabication

Books B-D

While Book A is concerned with spelling patterns and rules (as well as writing), in Books B-D the content is quite different. The summary of contents (detailed below) from Book C is practically the same as for the other two books:

Book C:	pages	content
	3-6	handwriting
	7-30	"Skills Training"
	31	Placement tests
	32-91	"Basic Program"
	92-101	"Written Expression"[8]
	102-105	"Refresher Program"[9]
	106-120	"Power Program"

The "Skills Training Program" is a "get-acquainted section where ideas of earlier books are re-examined" (B: T insert C). It is thus a review of spelling patterns and rules, with some new material included. This first six weeks of each year is nearly the only place for spelling instruction (as opposed to testing or writing instruction) after Book A.

The placement tests divide the class into three groups: (1) those who do poorly take the "Refresher Program,"[9] which contains words from previous years; (2) those who do very well take the "Power Program," which is a set of self-tests on words from the next level; and (3) average students take the "Basic Program." In addition, all students do the written work of the Basic Program. Since the Follett series, Books B-D, is primarily concerned with writing and testing, having three different levels causes no problems for spelling instruction: all learning of spelling is done individually. The teacher must only make provision for testing by groups, and even that is minimal.

The spelling content of these three programs (refresher, basic, power) is organized in an amazingly simple fashion: the total set of words for the year (chosen "on a basis of frequency of use in writing," B: T33) is divided into from 3 to 6 "levels" (no indication of their significance is given); within each level words are alphabetized and then divided into lists of words of a certain number to be learned in each lesson. There is thus no organization other than alphabetical order and no concern for sound-to-spelling correspondences. Pupils are simply to learn the spellings of these words, with memorization being the most obvious method. Any concern for sound-to-spelling correspondences in Book A and in the "Skills Training" sections is completely absent from the remainder of Books B-D. The following sections list what little spelling content is introduced in these books, most of which is in the "Skills Training" sections.

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[8]Exercises assigned for each lesson.

[9]Not used in Book B.

Content of Book B

[e] → ai

[o] → oa [o] → ou [o] → o...e

[ə] → a /#__

[z] → z

[n] → kn

Suffix: -er

Suffixation: ∉ + ed/ing; C + C ed/ing

Other
  Homophones

Content of Book C

[ər] → ur

[ɛ] → ea

[ǰ] → g

[s] → c [s] → c /V__e

Suffixes: -es, -ly, -est, -'s

Suffixation: y → i + es; ∉ + er/est

Other
  Contractions
  Compounds

Content of Book D

Dictionary pronunciation symbols are used, primarily as stimuli for writing words. Some earlier spelling rules are noted explicitly.

[(y)u] → u...e

[ay] → y [i] → y

[oy] → oi

[ɔ] → au

[kw] → qu

[r] → wr

[ǰ] → dge

The Lippincott Spelling Series, *Basic Spelling*

The series reviewed here is:

Glim, T.E., & Manchester, F.S. *Basic spelling.* Philadelphia: J.B. Lippincott Company.

Precise titles and dates vary as follows:

Book 1: *Basic spelling*, 1969. (workbook)
Books 2-8, hard-bound: *Basic spelling keys*, 1967.
Books 2-8, paperback: *Basic keys to spelling.* (This version has not been seen, but it is apparently the same content and date as *Basic spelling keys*.)

Teacher's editions

The teacher's editions have extensive comments on content, purpose and method. The voluminousness of these comments can be noted in the following comparison of teacher's and pupil's pages.

Book	Teacher's pages	Pupil's pages	Ratio (Teacher/Pupil)
1	32	78	.41
2	87	159	.55
3	79	160	.49
4	95	176	.53

While this could best be judged by a teacher using the series, it seems possible that there is too much material for the teacher. This may be especially true since the teacher's notes are separate from the pupil's text and thus require much moving back and forth. (In Book 1 there are a few notes in the pupil's text, but the majority of the comments for the teacher are separate.)

Nonetheless, for the most part, there is sufficient helpful information for the teacher, especially in the "purpose and content" section which introduces each lesson. In addition, the teacher's edition cross-references words and spelling patterns within and between books.

Sound patterns and spelling patterns

These two patterns underly the Lippincott series, so they should be defined. "Sequences of sounds that are consistent or regular in their

utterances are sound patterns" (1: Tiii). This is a vacuous definition as given. By their examples ("the sequences of sounds uttered when the words pain, cane, and reign are spoken are sound patterns," 1: Tiii), it appears that sound patterns are rhyming parts of words.

The definition of "spelling patterns" is equally vacuous: "The sequence of letters that represent sounds..." (1: Tiii). From the examples (glove, stove, prove; fat, pat, sat, hat; 1: Tiii), it appears that a spelling pattern is a sequence of letters occurring at the end of a set of words, although "spelling patterns" also appear to be simply grapheme units.

As can be seen from the examples, sound and spelling patterns do not necessarily correspond. However, although the series is concerned with the rule-governed spelling of sounds, it is organized around spelling patterns. Thus, for example, one lesson (2: Unit 17) contains the following words: tree, green, feet, seed, see, sleep, keep, been; while the first seven words contain the same sound and spelling (i.e., the same rule, [i] → ee), been only follows the spelling pattern. There may be some doubt whether such organization in terms of response characteristics is wholly appropriate for spelling instruction, but this is an empirical question which needs investigation.

However, although there is considerable use of "spelling patterns," the primary emphasis is on sound-to-spelling correspondence rules, which may involve larger "patterns" (as defined above) but which are not exclusively bound to them.

"Outlaws"

As noted, the primary emphasis in the Lippincott series is on regular spelling rules as they illustrate the alphabetic nature of English orthography. Irregularly spelled words are called "outlaws" and in the early stages are accompanied by a picture of a masked bandit. Because of the emphasis on spelling patterns, irregular words are common (e.g., been in the example above; of when [a] → o is introduced, 1: 23). However, there are few irregular spellings in Book 1, so that the students may become familiar with the more common regularity of English spelling. In time, as the spelling patterns increase in complexity, the number of irregular words also increases.

Confusion between spelling and sound

While sound patterns and spelling patterns are differentiated, there is still some apparent confusion between spelling and sound (although not as bad as found in the McGraw-Hill series). Some of this confusion seems to be the result of the authors' concept of spelling patterns, where words within the same pattern have different phonological representations. This is illustrated by the following comments;

> [in a lesson on final ll and ff]
> ...pull and off do not have the sounds that the children might expect these words to have (2: T37).
>
> [in a lesson on [ɔ] → au]
> ...the word aunt being [the] exception in pronunciation (2: T80).

Since this is a spelling course, it would be more appropriate to say, e.g., that the word [ænt] is an exception in spelling.

However, the confusion between spelling and sound cannot always be excused on the basis of emphasis on spelling patterns. In many cases, the authors explicitly say they are teaching spelling-to-sound (i.e., reading) correspondences:

> The purpose of this unit is to introduce the z sound for se (3: T69).
>
> The ee words involve a double-vowel generalization--when two vowels are together..., the first 'says its name' and the second is silent (2: T52).

These are rules for reading and should not be the purpose of a spelling lesson. (In addition, the second "rule"--often stated as "when two vowels go walking, the first one does the talking"--has been discredited many times in the literature, and is of little value in reading; cf, Burmeister, 1968; secondary vowels in Berdiansky, Cronnell, & Koehler, 1969.)

Linguistic considerations

The authors, who are assistant superintendents for instruction, often display considerable linguistic sophistication. They emphasize that "everyday" speech is not the same as the careful enunciation often found in the classroom, and encourage the normal pronunciation of words:

> Since, in everyday speech, the terminal sounds of words are seldom given the same value as in their initial position, the teacher is urged to bring into the children's awareness what words sound like when they are spoken from day to day in contrast with how they sound when they are said carefully. This does not mean that the teacher should insist upon full value being given in speech to the terminal consonant of every word that is said; rather...the children should realize that spelling patterns stand for spoken words even when all of the sounds are not precisely pronounced. (1: Txv)

> The terminal sound in ask and desk is frequently omitted in everyday speech. (1: Txxvi)
>
> [concerning the word a "(sounded 'uh')"]: Do not accentuate...a, but give stress to the succeeding word. (1: Tvi)

The authors differentiate between stops and continuants (including vowels), since the latter can be said in isolation, while stops cannot (cf, Russell & Pfaff, 1970a, b). (Unfortunately, Manchester and Glim do not recognize the difficulties, as Russell and Pfaff do, of isolating [l], [r], [h], [y], and [w].) The following is typical of the series' strong warnings about producing stops in isolation:

> *Caution:* since the sound of k is that of a stopped consonantal, do not isolate it as being that of kuh. Rather it should be treated as "the sound that begins" such words as come, cat, card, could, etc. (1: Txxiii)

In spite of many good points, the series has a number of linguistic failings, some of which will be noted here, while others will be noted in the description below of yearly contents. The series, as described above, is generally organized around "spelling patterns." These patterns do not always agree with "sound patterns," but this is often glossed over. For example, in Book 1, Lesson 18, the rule [ɛ] → e is taught and a CeC pattern is used. Unfortunately this pattern includes the word her. Although attention is called to this word, the information given ("it is difficult to hear the vowel sound, and it is slightly modified in the presence of the following r," 1: Txx) is inaccurate, since the vowel sound (technically [ɚ], or phonemically /ər/) is quite different from the [ɛ] being taught.

The series, as a whole, is weak on indicating dialect differences (e.g., nothing is said about wh being the spelling for either [hw] or [w]). The authors are not completely unaware of dialect, but their awareness is poorly placed. For example, when o is first introduced (1: Lesson 12) no comment is made on variant pronunciation, although it is noted ("Watch dialect," 1: Txviii) in the review (Lesson 15). Some note is also made of dialect variations on individual words, e.g., for get: "Common pronunciation in most [some?] dialects is that of git" (1: Txx).

Review and transfer

In addition to regular review lessons, provision is made for word and rule review throughout the lessons.

> This spelling program provides for children's rate of forgetting by reviewing words within

> the exercises and by associating previously learned words with words being currently studied. (2: T49)

The extensive cross-referencing noted above should be useful for review.

Transfer beyond the basic spelling words is provided by "extension words." In Book 1, this is particularly emphasized in the review lessons, where there are lists of rhyming spelling patterns "based upon the letters and patterns thus far presented" (1: Txxiv). In Books 2 to 4, the fifth day of each lesson is devoted to review and transfer ("Make more words"), and the number of extension words often approaches the number of basic words (see below). However, no provision is made for the testing of transfer.

Number of words[10]

Book	Basic words	"Extension" words	Total
1	101[11]	---	101
2	265	260	525
3	360	319	679
4	450	285	735

Content of Book 1

Book 1 is quite elementary and colorful. It is perhaps nearly as much concerned with handwriting as it is with spelling. The following list of content is only partially ordered.

[b] → b	[h] → h	[n] → n	[w] → w
[d] → d	[ǰ] → j	[p] → p	[ks] → x
[f] → f	[l] → l	[t] → t	[y] → y
[g] → g	[m] → m	[v] → v	

[k] → c / __a
[k] → k (environment not clearly specified here)

---

[10]Source: publisher's brochure.

[11]According to the publisher's brochure, "certain of the Grade 1 weekly list words are retaught in Grade 2."

[r] → r (in both initial and final position, in spite of the difference between Vr patterns and other VC patterns)

{[s] → s, [z] → s} ("It is recognized that the sound represented by s at the beginning of sat is not phonetically the same as the sound...at the end of as. Since the two sounds are sibilants...and closely resemble one another, it is not necessary in first grade to dwell on their variance when in initial or terminal position." (1: Tx) Glossing over these differences in Lesson 4 does not appear to be a good way to begin a rule-based spelling program.)

[š] → sh

Ø → e /v__# (explicitly mentioned)

[æ] → a (plus ar in the same lesson)
[ɛ] → e (plus er in the same lesson)
[ɪ] → i
[ɑ] → o (with an ostrich as example; the o in ostrich is sometimes pronounced [ɔ]; cf, the McGraw-Hill series)
[ə] → u

[i] → e (/__#)

{[o] → o, [u] → o} (/__# taught as spelling patterns, e.g., go, do, not as rules)

The letters z and q (in qu) are introduced to complete coverage of the alphabet, but "no words are introduced because of the infrequency of occurrence of these letters in the English language" (1: Txxviii).

Only four words (Lesson 37) are explicitly introduced as sight words. However, as noted above, because of the emphasis on "spelling patterns," a great many lessons contain irregularly spelled words.

Books 2 to 4

Books 2 to 4 (as well as the following books) are organized around five daily lessons for each unit:

1. "Meet letters and words"
2. "Study your words"
3. "Work with your words" (including etymology)
4. "Test your writing and spelling (handwriting and weekly test)
5. "Make more words" (review and correction of weekly test; extension words)

Beginning with Book 2, spelling rules and generalizations are specifically taught.

Content of Book 2

[k] → c /__{o, u} ("Before a, u, and o, a c must go," 2: 31.)

[k] → k /__{i, e} ("Before i and e, a k must be," 2: 21.)

[k] → ck /[V̆]__

[ǰ] → g (/V__e#)

[w], [hw] → wh

{[θ], [ð]} → th

[l] → ll [f] → ff

[e] → a...e [ay] → i...e [o] → o...e

[ar] → ar [or] → or

[ər] → er [ər] → or /w__C

[i] → ee [i] → ea [ɛ] → ea

[e] → ay /__# [e] → ai

[u] → oo [ʊ] → oo

[ay] → y [ay] → ie

[aynd] → ind [ayld] → ild

[o] → ow [o] → oa

[old] → old

[oy] → oy (/__#) [oy] → oi

{[ɔ] → aw, [ɔ] → au} (Not differentiated by environment.)

[ ] → all

{[aw] → ow, [aw] → ou} (Not differentiated by environment.)

Suffixes: -s, -er

Other
Compounds

There are a few lessons in Book 2 devoted to irregular, but useful, words. However, as noted above, because of the emphasis on "spelling patterns," many irregular spellings are found throughout the book.

Content of Book 3

[ŋ] → ng /__# [ŋk] → nk

[č] → ch [č] → tch

[s] → c

[z] → s

[C] → CC

[ay] → igh

[(y)u] → ew
[(y)u] → ue

[ər] → ir [ər] → ur

[əl] → le

[i] → y /__# (unstressed)

Silent letters: kn, wr, mb

Suffixes: -ing, -est, -es, -ed, -'s

Suffixation: C + Cing; e + ing; y → i + es

Other
Contractions

Content of Book 4

By Book 4 little new rule content is added. There is considerable review and many more irregular spellings. Dictionary skills are taught, with a "spelling dictionary" in the book.

[ǰ] → dge /[v̆]__#

[kw] → qu

[f] → ph [f] → gh

Suffix: -ly

Suffixation: C + Ced, ∉ + ed

The McGraw-Hill Spelling Series, *Basic Goals in Spelling*

The series reviewed here is:

> Kottmeyer, W., & Claus, Audrey. *Basic goals in spelling*. St. Louis: McGraw-Hill Book Company, 1968.

This is the California state adopted spelling series.

"To the teacher"

The introduction to the series gives credit to linguistics and refers to Hanna and Moore (1953) and Hodges and Rudorf (1965), although, as will be noted below, the authors do not indicate elsewhere any great linguistic sophistication, nor do they appear to make much use of the findings of Hanna, Hanna, Hodges, and Rudorf (1966), on which the Hodges and Rudorf article is based.

The primary purpose of this series is "the development of *spelling power*" (2: Tvi, italics in the series), which is the making of generalizations about spelling. These generalizations are to be learned inductively, an approach which is stressed throughout.

In the introductory materials there is a six-page section titled "Our language and spelling." This section briefly describes the development of English, the sounds of English, the history and use of the alphabet, and the history of English spelling. However, very little is said about the sound-to-spelling relations of modern English.

This last comment is also true of the lesson notes in the teacher's edition, which are mainly concerned with method and with giving the answers. There are very few linguistically oriented comments, and these are not much more sophisticated than what is in the student's book. Thus (1) the teacher is not told relevant and useful spelling rules, (2) there is little indication of dialect differences, and (3) problem areas are not clearly noted.

As indicated (and as will be noted in greater detail below), the rule-governed nature of English orthography is little taught in the McGraw-Hill series. Thus there are no transfer tests on these rules, even those which are presumably to be induced.

Confusion of spelling and sound

That teachers and educators often confuse spelling and sound has been noted for some time. The McGraw-Hill series is also guilty of this fault, in both subtle and glaring ways.

Although this is a spelling program, it is often involved with "the sounds that letters say," which is a reading problem, albeit poorly stated and conceived. For example, "In many words a, e, i, o, and u say their names" (2: 31). However, the opposite should be stated for spelling: "In many words, [e], [i], [ay], [o], and [yu] are spelled by the letters whose names are the same sounds." (While this may be a poor statement, it is at least a spelling statement.) While spelling and word attack activities may be related, some care should be taken to differentiate between them.

Number of words used[12]

Book	Basic words	Enrichment (or "power") words[13]	Total
1	144	---	144
2	256	237	493 (plus 180 "words for good spellers")
3	350	284	634 (plus 350 "words for good spellers")
4	561	158	719 (plus 205 "words for good spellers")

Content of Book 1

Book 1 is quite introductory and is only moderately concerned with teaching spelling rules. Handwriting is stressed: upper- and lower-case letters and numbers are taught. Auditory training is provided through

---

[12]While these are the numbers given by the authors or found by counting word lists, they overestimate the actual number of different words used in the series, since words may be repeated--as spelling words--from grade to grade. For example, who occurs in Book 2 (p. 152; basic word list, p. 160), Book 3 (p. 72; not on word list), and Book 4 (p. 42; "power" word list, p. 160). The word bell occurs in Book 1 (p. 57; word list, inside back cover), Book 2 (p. 114; "power" word list, p. 27), and Book 3 (p. 19; basic word list, p. 160).

[13]Words "formed by making structural or substitution changes in the words from the basic list" (2: Tiv). By "substitution changes," letters are changed in the basic words; e.g., the enrichment words cake, rake, and bake are taught by making "new words by writing c, r, and b in place of t in take" (2: T105).

rhymes and identification of beginning consonant sounds. The 144 words (92% of which are repeated in Book 2) are introduced primarily as sight words. The only correspondences taught are for consonants in initial position.

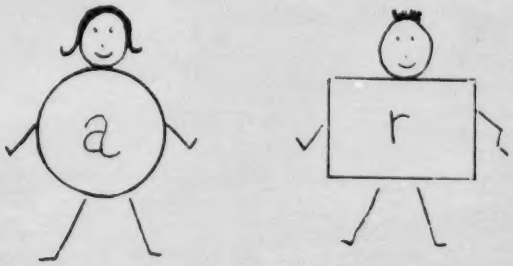
[b] → b	[h] → h	[n] → n	[t] → t
[d] → d	[j] → j	[p] → p	[v] → v
[f] → f	[l] → l	[r] → r	[w] → w
[g] → h	[m] → m	[s] → s	[y] → y
			[z] → z

[k] → c, k

Books 2 and 3: Format and methods

This section will indicate some of the notable features of Books 2 and 3 of the McGraw-Hill series. No attempt has been made to be inclusive; instead, interesting and unusual features are noted.

Immediately obvious are the cartoon characters used to indicate spellings: female characters (with round bodies) for the vowels and male characters (with square bodies) for the consonants. These characters are very clever and appealing. However, they are among the chief perpetuators of spelling-sound confusions and often give letters (sounds?) extremely anthopomorphic qualities. For example, in the following (simplified) illustration, "r" is a doctor telling "a," his patient, "Don't say your short sound: Say ah."



While this is "cute" and probably sells books, it is misleading and not necessarily an aid to spelling.

Pictures are commonly used as cues for spelling, which is undoubtedly an advantage for individual study. Pictures may cue the spelling of a whole word, or a part of a word (e.g., "Write the spelling words that begin like [picture of a feather]," 2: 51).

In Book 2, pictures are used for a kind of rebus or blending exercise. For example, a picture of an Indian and a picture of a top cue, using the first sound and letter of each, the word it (2: 32).[14]

There is some descriptive writing practice. Generally a series of pictures which tell a story are used to cue a short writing exercise in which current spelling words are to be employed. In Book 3, some of this practice is replaced by proofreading, i.e., correctly rewriting sentences, etc., printed in the book with misspelled words.

Content of Book 2

There is a moderate amount of content in Book 2. However, because of presentation method and lack of rule structure, it is far from clear how much of this is learned, at least beyond a rote word-for-word basis.

An example of poor presentation is the "teaching" of the rule [ay] → y/__#, e.g., try, fly. The rule is first introduced "if there is time...to the better spellers in the class" (2: T61). Later (2: 122) why is introduced in the unit teaching wh. In the same unit (2: 124), by, try, and dry are introduced as enrichment words by substitution of letters in why. Finally (2: 152) my is introduced in a unit of irregular words ("more tricky words"), although it can be taught with a common semi-rule (as is noted originally, 2: 61, and also in this unit: "My is not really irregular...," 2: 152). Thus, the average student is probably never taught this rule, and may even be given to believe that it is irregular. No further interest is taken in the rule until Book 2 (Unit 23) when teaching "changing y to i *before* es" (2: 98, italics added).

Because of this rather casual handling of rules and words, it is difficult to be sure of what is really taught and what may be only accidental learning (if learned at all). The following (generally ordered) listing of Book 2 content probably overestimates the amount that is actually taught and/or learned. In addition, while much of the content will be expressed in terms of rules, the actual rule teaching is very limited and perhaps misleading.

[æ] → a [ɛ] → e [ɪ] → i [ə] → u
[a] → o (The key word for [a] → o is ostrich, where, however, the vowel is [ɔ] in many dialects. This sound is also recognized as having an irregular spelling, Unit 13.)

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[14]Unfortunately, on this same page, the [ɪ]/i of an Indian and the [s]/s of a sun cue [ɪz]/is, thus violating sound-to-spelling correspondence rules. The irregularity of is is nowhere noted for either students or teachers.

[š] → sh [č] → ch [ŋ] → ng {[θ], [ð]} → th

[hw], [w] → wh (Although first introduced in 2: 46, no indication is made of dialect variation between [hw] and [w] until 2: 122.)

[o] → o/__# [i] → e/__# [ay] → y (/__#)

[i] → ea, ee [e] → ai [o] → oa

[ay] → i...e [e] → a...e [o] → o...e
(All three VCe rules are taught in one unit after the secondary vowel rule listed above.)

[u] → oo [ʊ] → oo

[o] → ow (No indication that this generally only occurs finally.)

[aw] → ou, ow (No indication of environment determining spelling. The sound [aw] is a diphthong--containing two sounds--so it is questionable as to whether it should be called, "one sound," 2: 90-91.)

[k] → ck (The generalization, "at the end of a word or syllable," 2: T108, is given to be learned inductively and stated. No mention is made of the fact that this spelling is used only after a short vowel.)

[ks] → x

[l] → ll

[ɔ] → o [ɔl] → all

[i] → y /__# (unstressed)

[e] → ay

[ə] → o (stressed)

[oy] → oy

[ər] → er (unstressed)

[ər] → ir, ur, or (No indication of determining environment for [ər] → or /w__C.)

Suffixes: -s, -ing, -ed, -er
(Introduced rather casually.)

Other
Homophones
Syllabication (Students are encouraged to pronounce and spell syllables individually, e.g., kitten = [kɪt-tɛn], 2: 103-104.)

(This is clearly treated as a reading task in the McGraw-Hill series:

> This unit presents one of the two patterns of syllable division which are commonly taught as *reading skills*... (3: T146; italics added).

No indication is given of any value of this for spelling.)

There is considerable emphasis in the McGraw-Hill series on irregular words. While they are no doubt important, it would seem that their introduction should be controlled, especially in the early stages when children need to learn the regular spellings in order to grasp the rule-governed nature of English orthography. However, in Book 2, over 14% of the basic words are irregular.

Three units are devoted to "tricky words," i.e., irregular words. However, as pointed out above, not all "tricky words" are really irregular (even by the series' standards). On the other hand, many words in the regular units are irregular. For example, Unit 28 introduces the rule [i] (unstressed) → y / __#. In this unit are the irregular words any, many, pretty, and very, plus the regular--but with untaught rules--words baby, party, and story. Thus, in spite of much talk about inducing generalizations, the series is poorly designed to help in this direction.

Content of Book 3

[s] → ss

[(y)u] → u...e

[ʊ] → u

[z] → s

[ar] → ar

[s] → c (This is taught as a reading rule in conjunction with [k] → c. While the environment for c → [s] is easily determined, the opposite is not so for spelling, in spite of the series' misleading generalizations.)

[r] → wr

[č] → tch (t is interpreted as a silent letter)

[ay] → igh [ay] → ie (/__#) [aynd] → ind

[ɔk] → alk

[ɛ] → ea

[or] → or

[ə] → a (#__)

[bi] → be-

[əl] → le

Suffixes: -es, -est

Suffixation: C + Cing; ɛ + ing; y → i + es

Other
Abbreviations
Contractions
Compounds

Content of Book 4

In Book 4 there is again a considerable number of irregular spellings or regularly-spelled words presented as irregular. (A notable example of the latter is qu which must be memorized "since the sounds in the words are not helpful," 2: 117.)

At this point in the series, spelling rules are presented more explicitly although the "rules" are often more appropriate for reading than for spelling, and the correspondences have appeared in earlier books. (The rules are presented by a human character named "Ricky Rulefinder" pictured in interesting situations which have nothing to do with the spelling lesson, generally not even related to a single word in the unit.)

The actual spelling-lesson content of Book 4 is minimal, much of the text being used for various related matters: handwriting hints, dictionary helps, proofreading, and etymology ("Stories About Words"). Each unit concludes with "More Words for Good Spellers," which are organized around different subject matters, e.g., sea life, (geographic) parallels, mathematics, magnets, punctuation, continents, animals.

Besides review of Books 2 and 3, the spelling content of Book 4 is concerned primarily with multisyllable words, including study of suffixes, prefixes, and syllabication. Because it is rather disorganized and contains so many irregularities, it is difficult to describe it in great detail. Presented here are only those correspondences generally found in spelling programs.

[oy] → oi

[ɔ] → au [ɔ] → aw

[ǰ] → g

[n] → kn

[kw] → qu

[f] → ph [f] → gh

Affixes

The Scott, Foresman Spelling Series, *Spelling Our Language*

The series reviewed here is:

> Monroe, Marion., Aaron, I., & Schiller, A. *Spelling our language*. Glenville, Illinois: Scott, Foresman, 1969.

Of the authors, Monroe was formerly director of the USC reading clinic, Schiller is professor of English and chairman of linguistics at the University of Illinois (Chicago), and Aaron is unidentified.

Goals

Goals are explicitly stated in the teacher's editions (e.g., 1: Tviii). In addition to common goals like "use the spelling patterns of English" and "develop an ever increasing basic spelling vocabulary," there are additional goals which should be noted.

One useful goal is "to develop increasing competence in the use of a dictionary, glossary, and thesaurus as sources for the spellings, pronunciations, and meanings of words..." (1: Tviii). Considerable emphasis is placed on the use of references, as will be noted below.

Handwriting is also emphasized as related to spelling: It is "the responsibility of the writer to master both skills. A correctly spelled word that is written illegibly does not usually communicate" (1: Tviii).

An additional goal is emphasized to a rather disturbing degree; this is correct spelling:

> "...correct spelling is one of the <u>essential</u> skills in written communication;"
>
> "...good spelling is...a sign of <u>intellectual and social competence</u>" (1: Tviii; emphasis added).

Because of the complexities of English orthography, correct spelling is quite difficult, even if socially (but certainly not intellectually) necessary. To attempt to instill "an attitude of respect for correct spelling" (1: Tiii), without regard for the nature of English orthography, is a sign of pedagogical irresponsibility.

Handwriting and descriptive writing

As noted above, handwriting is emphasized as a major skill in spelling, although this emphasis is gradually faded out. (But see, for example, 3: 18 for some detailed comments on the writing of spelling words.)

Descriptive writing is also emphasized beginning in Book 2, where the children are to complete stories by filling in the blanks with spelling words (e.g., 2: 103) or write a story based on pictures in the text (e.g., 2: 32; 2: 95). Book 2 also introduces many words grouped in terms of common content (e.g., "At the park," 2: 52-53). This grouping of words "for imaginative writing opportunities" (publisher's brochure, pp. 2-3) continues in Books 3 and 4. However, the emphasis on descriptive writing is reduced and appears to be more suggestive than necessarily part of the course.

Organization of content

In the previous paragraph, it was noted that words are grouped "for imaginative writing opportunities." What this means in effect is that, in Books 3 and 4 primarily, groups of words are presented according to subject matter. This also means that lessons include regular words for which rules have or have not been presented, as well as irregular words, all thrown together with little concern for teaching spelling in any systematic way. (For example, a word list for baseball, 3: 24: pitcher, wear, diamond, plate, base, fair, strike, batter, there, dare, home, and start.)

When spelling (rather than words for writing on a subject) is taught, it is organized by sounds. That is, a lesson presents several spellings of one sound, including exceptions (e.g., for [ay], 3: 53: igh, i(ld), i(nd), ie, y; height, buy, eye). While this certainly encourages a set for diversity, it may also be confusing, especially when environment is not specified, which is commonly the case. (It should be noted that the Scott, Foresman series makes no explicit provision for transfer of spelling ability to new words, either within the lessons or in testing.)

Reference materials

From the very beginning, emphasis is placed on using reference materials for spelling and writing. In grades 1 and 2, children are to use *My little pictionary* and *My second pictionary*, respectively, "to find words they need to spell in their brief written communications" (1: Tviii).

My little pictionary contains 1341 words, less than a quarter of which are actually pictured. They are arranged according to the following classifications:

Words for people
Words for animals
Words for what we do and did
  [Verbs are all listed with base and past tense forms.]

Words for things
  [i.e., all nouns which are not people, animals, places or times.]
Words for places
Words that tell what kind
Words that tell what color
Words that tell how much, how many, or which one [not pictured]
Words that help tell where
  [adverbs and prepositions; not pictured]
Words that help tell when [both nouns and adverbs]
Little words that help [i.e., other function words; not pictured]

Each section begins with an alphabetical list of unpictured words, followed (in those sections where possible) by the pictured words, organized, by page, somewhat on a semantic basis.

My second pictionary contains 3818 different words, nearly a third of which are pictured. The number of pictured words is somewhat deceptive, since it includes numbers through 30, all 50 states, and some rather unusual animals and plants (e.g., ptarmigan, nene, kukui, paloverde). This book begins with a section on how to use it, followed by the picture dictionary proper, arranged generally in the same categories as noted above for *My little pictionary*. The words (and pictures) in each category are iisted alphabetically. The third section, "Words and meanings," comprises over half of the book and is a regular children's abridged dictionary, with syllable division, definitions, and illustrative sentences (but no pronunciation or part-of-speech information).

It is announced in Book 3 (3: T5) that children are to develop the ability to use the *Thorndike-Barnhart beginning dictionary* "to look up all the words they need to spell, and to master all major pronunciation symbols except the schwa." While it is true that pronunciation symbols are used throughout Book 3, there is no other indication of dictionary use in the text.

Beginning with Book 4, a glossary is included of words used in the book. This glossary (based on the Thorndike-Barnhart dictionaries, also published by Scott, Foresman) is essentially an abridged dictionary. However, there is still very little material on dictionary use included in the text, so it is not clear when and how children learn to use a dictionary.

Scott, Foresman also publishes two thesauruses entitled *In other words:* one, *A beginning thesaurus*, for grade 3 (and 4?) and one, *A junior thesaurus*, for grades (4?) 5 and 6. (It is not clear which is used in grade 4; see 4: T4; 5: T4; publisher's brochure, p. 10.) These books are "suggested for use with the *Spelling our language* Program... to help youngsters speak and write more effectively" (publisher's brochure, p. 10). While clearly useful for descriptive writing, the use of a thesaurus in spelling is at most marginal.

References for spelling

In addition to dictionaries (and "pictionaries") and thesauruses as aids to spelling, the Scott, Foresman series has two other reference sections of interest. (In addition, beginning in Book 5, there is a section titled "Aids to Spelling," which contains rules for affixation.) From Book 4 on, there is a two-page "spelling table," in which all (or nearly all) possible spellings are given (in words) for all English sounds. This will help the student "find out where to look in the glossary for words you know how to say, but not how to spell" (4: 126).

In Books 3 and 4 only, there are reference sections entitled "Spelling (the) consonant sounds" and "Spelling (the) vowel sounds." In these sections, the sounds of English are listed with their various spellings, along with comments and word lists for each spelling. (In Book 4, the consonant section is limited to sounds for which "the spellings are different from the letters used as symbols for the consonant sounds," 4: 128; however, Book 4 also has the "spelling table" described above.) Not only do these sections provide useful information on English orthography and spelling rules, but they also provide a source to consult when trying to spell a word.

All the references for spelling noted here would appear to be very useful. A dictionary is the best source of correct spelling, but it is first necessary to know how a word may be spelled in order to find it in the dictionary. The aids in the Scott, Foresman series should thus prove useful.

Number of words

Book 1:	50	"basic words" (some irregular, but half covered by rules taught in Book 1)
	69	"words that fit various spelling patterns" (1: Txv)
	119	
Book 2:	130	"basic words" (regular and irregular)
	150	"words that are examples of spellings for vowel sounds taught at this level"
	234	"words that are examples of...vowel sounds...which were presented but not tested (2: Txv)
	514	(including some words from Book 1)
Book 3:	353	"basic spelling words"
	525	"pattern words"
	191	"contracted forms and base words with their inflected forms" (2: T160)
	1069	(including some words from Book 1 and 2)

Book 4:[15] 271 "basic words"
274 "pattern words"
545 (including some words from previous books)

Content of Book 1

All consonant rules are presented first. (The following list is partially ordered.)

[b] → b	[h] → h	[n] → n	[t] → t
[d] → d	[j] → j	[p] → p	[v] → v
[f] → f	[l] → l	[r] → r	[w] → w
[g] → g	[m] → m	[s] → s	[y] → y

[k] → c, k (not differentiated)

[k] → k, ck /__# (not differentiated)

[š] → sh [č] → ch

[l] → ll /__# (not differentiated from l /__#)

Vowels are introduced in terms of letters. (The following list is ordered.)

[æ] → a	[ar] → ar	[e] → a...e
[ɪ] → i	-----	[ay] → i...e
[a] → o	-----	[o] → o...e
[ə] → u	-----	-----
[ɛ] → e	-----	-----

An exemplar of each vowel rule is generally introduced as a sight word ("Basic List") before the rule is taught; e.g., and, p. 19, [æ] → a, p. 21; car, p. 25, [ar] → ar, p. 27; cake, p. 30, [e] → a...e, p. 32.

Content of Book 2

Beginning in Book 2 there are more specific statements of spelling rules, although environments are not indicated for variable spellings of such sounds as [l], [k], [s]. Phonemic notation between slashes[16]

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[15]No frequency or word list is given; the frequencies reported here were determined by the author (BAC) and may not reflect the series' views and may be too low.

[16]Slashes are the normal linguistic convention for indicating a phonemic transcription. Brackets ([ ] properaly used to indicate phonetic transcription) have been used by the Rules of Correspondence activity because of the need for slashes to indicate environment; e.g., a → [a] /__r was felt to be more readable than a → /a/ /__r.

(e.g., /s/) is used for consonant sounds. In general, two or more spellings for the same sound are presented in the same lesson or in adjacent lessons.

The spellings of long vowel sounds are grouped together as follows (with other rules between groups). Some indication of governing environment is taught where noted.

(with review of [ay] → i...e)		[ay] → y /__#	[ay] → igh
		[ay] → ie	
(with review of [e] → a...e)		[e] → ai	[e] → ay /__#
(with review of [o] → o...e)		[o] → oa	[o] → o /__#
		[o] → ow	[o] → oe /__#
[i] → ee	[i] → ea	[i] → e	
[(y)u] → u...e	[(y)u] → ew	[(y)u] → ue	[u] → oo

Other vowel rules

[or] → or

[ər] → er [ər] → ir [ər] → ur

[u] → oo

Consonant rules

[z] → z [z] → zz /__# [z] → s /__# (including -s suffix, which is used, but not explicitly taught)

[ŋ] → ng [ŋ] → n /__k

[kw] → qu

[ks] → x

[ǰ] → g [ǰ] → ge /__#

[s] → c [s] → ce /__#

[s] → ss

[ó] → th

Other
Homophones

Content of Book 3

Book 3 continues the system of Book 2; i.e., spelling rules are grouped according to various spellings of one sound. This grouping also includes numerous irregular spellings of the sounds being taught, which are noted as exceptions.

Book 3 extends the use of slashes to indicate the pronunciation of vowel sounds (with dictionary diacritic symbols). There is extensive use of prose in Book 3, with considerable explanation to the student.

The following rules are clearly noted and taught, generally with review of previous rules for the same sounds.

[ɛr] → ear [ɛ] → ea

[aynd] → ind [ayld] → ild

[old] → old [olt] → olt

[ɔ] → ough [ɔ] → o [ɔl] → all
[ɔk] → alk [ɔ] → aw [ɔ] → au

[ə] → o (stressed)

[ər] → or /w__C

[ʊ] → u

[oy] → oi [oy] → oy /__#

[aw] → ou [aw] → ow /__#

Ø → e/v__ #

[č] → tch /[v̆]__

[f] → ph [f] → gh

Silent letters: kn, wr, mb

Suffixes: -s, -es, -ed, -ing, -ly, -'s

Suffixation: y → i + es/ed; e + ed/ing; C + C ed/ing

Other
  Contractions

Content of Book 4

Book 4 continues along the lines of Book 3, with much review, much prose, and many exceptions, including "spelling demons." With the introduction of two-syllable words, the organization becomes much looser and there are more irregularities. Some palatalizations are included.

[i] → y /__# (unstressed)

[ə] → a /#__

[ə] → a, e, i, o, u (unstressed)

[ər] → er, ure, or, ar

[əl] → al, ol, le, el, il, ile

[fəl], [ful] → ful

[ən] → en, an, ain, on, in

[C] → CC

Suffixes: -er, -est

Other
  Etymology
  Use of glossary
  Abbreviations

The SRA Spelling Series, *Words and Patterns*

The series reviewed here is:

> Day, Katharine, M., & Lightbody, Patricia, C. *Words and patterns.* Chicago: Science Research Associates, Inc. (SRA), 1970.

The content of this series is close to the ideas about spelling presently held by Rules of Correspondence staff. That this is true is hardly surprising: The linguistic consultant for the SRA series was Richard Venezky, whose work has had considerable influence on the SWRL Mod 2 reading program, upon which the spelling component will be based.

Grade levels

The SRA series begins in grade two as Level A.

Linguistic background

As noted above, Venezky was the linguistic consultant for the SRA series, which "is based on a recent linguistic study (Venezky & Weir, 1966; Venezky, 1967) in which important new knowledge was gained concerning the spelling-to-sound patterns of the English language" (p. T1).

The whole series has considerable linguistic information for the teacher, explaining spelling rules and their exceptions. Each lesson has a section, "Linguistic Background for the Teacher," which provides relevant information on the spelling and pronunciation involved in the lesson. Such linguistic background is a notable feature of the series, since it gives the teacher ample information concerning the content. Included is information on dialect variation, which is well treated in the series. When spelling is to be taught in a linguistically valid manner, it is reasonable that teachers be provided with sufficient linguistic background to be able to make appropriate and intelligent use of the materials.

Terminology

While much traditional terminology is used, several of Venezky's terms are employed in the SRA series:

free vowel = long vowel
checked vowel = short vowel
spelling unit: two or more letters used to spell a sound (e.g., ch, ee); in Rules of Correspondence work, this has been called a grapheme unit.

marker: a silent letter used to indicate a pronunciation (e.g., the e in same) or to complete a spelling pattern (e.g., the e in have).

It should be noted that with both terminology and concepts, the series assumes a high degree of pupil sophistication.

"Three approaches to spelling" (p. T1)

Based on Venezky (1969), three approaches to spelling are used; these three approaches have been independently suggested by the Rules of Correspondence activity (Cronnell, 1970a).

1. "Words learned through regular spelling patterns." These are what Venezky calls "predictable patterns" and Cronnell calls "spelling rules." In the SRA series, "words...that follow a regular spelling pattern appear on a green backgound, suggesting the go-ahead [and use] message of a green traffic light."

2. "Words learned through pattern association." These are what Venezky calls "unpredictable but frequent patterns" and Cronnell calls "semi-rules." In the SRA series, "these words are presented on a yellow background..., indicating that caution should be used in applying the pattern to new words."

3. "Words learned by sight." These are what Venezky calls "unpredictable and rare patterns" and Cronnell calls "sight words." In the SRA series, "a red background, corresponding to a red traffic light, indicates that the spelling is so unusual that it can hardly ever be transferred to another word with the same sound." In addition, "words spelled in a regular way whose patterns have not yet been taught, but which are useful to the child at an early level, are also learned by sight."

Tests

Weekly tests are given for each lesson, including all the words of the week (about 10-12 per lesson), review words, transfer words, "word-building" (suffixed) words, and "enrichment" words (from supplementary exercises). Test sentences are also included which use only words which have been previously taught.

Dictionary work

Beginning at Level C, dictionary work is begun; the purpose of this is to use the dictionary to find the correct spelling of words, especially those for the pronunciation of which more than one spelling is possible (e.g., seem, seam). This is an extremely useful skill and is developed further in Levels D and E.

Number of words used

Level	Basic words	Transfer, word-building and enrichment words	Total
A	351	---[17]	351
B	426	---[17]	426
C	460	213	673

Content

The content of Levels A, B, and C of the SRA series follows. It should be noted that environments, as listed below, are explicitly taught in the series.

Content of Level A

[b] → b
[d] → d
[f] → f
[g] → g
[h] → h
[j] → j
[l] → l
[m] → m
[n] → n
[p] → p
[r] → r
[s] → s
[t] → t
[v] → v
[w] → w
[y] → y

[f] → ff / [V̆]__#
[l] → ll / [V̆]__#
[s] → ss / [V̆]__#

[č] → ch

[ŋ] → ng /__#

[ŋ] → n /__k

[š] → sh

{[θ], [ð]} → th

[hw], [w] → wh

[z] → s / [V̄]__# ([V̄] = V...e)

[k] → c /__{a, o, u, C}

---

[17]No figures are given for Levels A and B.

[k] → k /__{e i}

[k] → k / [V̄] [C] __# ([V̄] = V...e or VV)

[æ] → a [ɛ] → e [ɪ] → i [a] → o [ə] → u

[ar] → ar

[e] → ay /__# [e] → a...e /__[C#]
[o] → ow /__# [o] → o...e /__[C#]
[o] → o /__#
[ay] → y /__# [ay] → i...e /__[C#]

[i] → ee [i] → e /#C__# [i] → y /__# (unstressed)

[ɔ] → aw /__# [ɔ] → o [ɔl] → all

[u] → oo [u] → u

[ə] → o (stressed)

Suffixes: -ing, -ed, -s

Other
Compounds

Content of Level B

[C] → CC /[V̆]__[V]
[C] → C /[V̄]__[V]

[ks] → x

[s] → c

[k] → ck /[V̆]__#

[n] → kn

[(y)u] → u...e /__[C#] [u] → oo

[aw] → ow /__(n)# [aw] → ou (elsewhere)

[oy] → oy /__# [oy] → oi (elsewhere)

[o] → oa

[e] → ai

[or] → or

[ər] → er (unstressed) [ər] → ir

[əl] → le /...C__# (unstressed)

[ə] → a /#__... (unstressed)

[ɔk] → alk

[old] → old [ayld] → ild

[aynd] → ind

[est] → aste

[bi] → be-

Suffixes: -es, -ly, -y, -er, -est

Suffixation: C + C ing/ed; e + ing/ed

Other
- Homophones
- Silent letters
- Abbreviations

Content of Level C

[kw] → qu

[č] → tch /[V̆]__#

[ǰ] → ge /[V̄]__# ([V̄] → V...e) [ǰ] → dge /[V̆]__#

[s] → ce

[g] → gu

[r] → wr

Ø → e /v__#

[C] → C /[V̆]__[V]

[i] → ea [i] → ie [i] → i...e [i] → ey /__# (unstressed)

[ɛ] → ea

[(y)u] → ew /__#

[ɔ] → au

[ayt] → ight

[enǰ] → ange

[ər] → or /w__C [ər] → ur

[ə] → a, e, i, o, u (unstressed)

[ən] → on /__# (unstressed) [ən] → an /__# (unstressed)

[ət] → et /__# (unstressed)

[ik] → ic /__# (unstressed)

[di] → de [pri] → pre [ri] → re

Suffixes: -ful, -'s

Suffixation: i → y + es/ed

Other
- Contractions
- Dictionary use
- Pronunciation symbols

Summary Statements

Economy

The Economy series has an extremely poor linguistic orientation, providing confusing information which is unnatural and difficult to use, including dialect information which is generally inappropriate where given. This is particularly unfortunate, since the series is primarily teacher-directed. However, the spelling content is generally accurate and well sequenced, with adequate provision for review. There is a great deal of material in the Economy series which, if not too much to be taught and learned, appears to provide an above-average basis for learning the sound-to-spelling correspondences of English.

Follett

The Follett series is so concerned with writing (i.e., descriptive writing and grammar) and with testing, that very little time is devoted to actual spelling instruction. What little spelling instruction there is, and that primarily in first grade, is more involved with spelling patterns than with individual sound-spelling relations; after first grade, spelling primarily consists of the memorization of word lists. Thus the Follett series appears to provide a very poor basis for learning the sound-to-spelling correspondences of English.

Lippincott

The Lippincott series, despite some confusion of spelling and sound and lack of sufficient indication of relevant dialect differences, has a good understanding of the relations of sound and spelling and provides an adequate linguistic base for instruction. However, the use of spelling patterns, rather than individual correspondences, admits a considerable number of exceptions. The extensive and accurate teachers notes provide for review and transfer. The Lippincott series appears to provide an above-average basis for learning the sound-to-spelling correspondences of English.

McGraw-Hill

The McGraw-Hill series has a weak linguistic orientation, with considerable confusion of spelling and sound, lack of information about spelling and little indication of dialect differences. Spelling rules and words are handled casually; this loose organization (or lack thereof) permits a considerable emphasis on irregularity and may cause confusion in learning. The McGraw-Hill series appears to provide a lower than average basis for learning the sound-to-spelling correspondences of English.

Scott, Foresman

The Scott, Foresman series places considerable emphasis on references for use in spelling (both within the text and as separate books). While the reference materials are quite good, there is little instruction in their use. Words are grouped in two ways; by subject matter or by common spellings of one sound; both methods result in a considerable number of exceptions. Although the spelling content is generally good, very little linguistic information (including dialect information) is included. The Scott, Foresman series appears to provide an average basis for learning the sound-to-spelling correspondences of English.

SRA

The SRA series closely approximates the linguistic orientation and conception of spelling which underlie the work of the Rules of Correspondence activity. Adequate and accurate linguistic information (including dialect information) is included, and provisions are made for review and transfer in both instruction and testing. Spelling words are divided into three groups: those spelled by regular predictable rules; those spelling by common but unpredictable rules; and exceptions, which are clearly noted for learning by sight. The SRA series appears to provide a very good basis for learning the sound-to-spelling correspondences of English.

Adequacy ranking

Six spelling series were reviewed and described according to their linguistic orientation, conception of spelling and treatment of spelling instruction. The content of each series through fourth grade was also reported. As a result, the series can be ranked as follows, from best to worst, in terms of how well they appear to provide a basis for learning the sound-to-spelling correspondences of English:

SRA
Lippincott } (ranked together)
Economy }
Scott, Foresman
McGraw-Hill
Follett

In the following section, comparisons will be made among the series in terms of specific aspects of spelling instruction.

Section II

Comparisons of Spelling Series

In this section, comparisons are made of the six spelling series in terms of their treatment of eight areas which are considered important to the overall success of spelling instruction. This section is organized around the eight aspects in order to promote better understanding of present spelling practices. (To make comparison easier, all spelling series are discussed in terms of grade levels.)

Linguistic Orientation

Since spelling is the relation of written symbols to sounds, it is important that spelling instruction have a valid linguistic base. There is considerable variation among the series reviewed here as to linguistic orientation.

It is first of all important that the series as a whole have a understanding of the relation between sound and spelling in English. Those which indicate the greatest knowledge of this relationship are Economy, Lippincott, and SRA. Follett indicates--to the teacher, the student and the present writer--the least understanding of English spelling. McGraw-Hill, and to a lesser degree, Lippincott have some confusion of spelling and reading. While it may be useful to relate the two skills, it does not seem helpful to confuse them.

The three series (Economy, Lippincott, and SRA) which indicate the greatest knowledge of English spelling also give the most linguistic information to the teacher, although not with equal accuracy, as indicated below.

	Relative amount of linguistic information for teacher	Relative accuracy of linguistic information
Economy	high	low
Follett	none	---
Lippincott	high	medium
McGraw-Hill	medium	low
Scott, Foresman	low	medium
SRA	high	high

In general, the amount and accuracy of linguistic information for students parallels that for teachers. (For example, environments for spelling rules are explicitly taught in Economy, Lippincott, and SRA.)

Since dialect can influence spelling (cf, Boiarsky, 1969; Graham & Rudorf, 1970), it is of great importance that dialect be considered in spelling instruction. In lieu of separate editions for different dialects (which is generally impractical), dialect considerations must be presented to the teacher, who can, as a result, accommodate students in the classroom. With the exception of SRA, all the series do rather poorly in noting dialect, as indicated below.

	Relative amount of dialect information for teacher	Relative accuracy of dialect information
Economy	medium	low
Follett	none	---
Lippincott	medium	medium
McGraw-Hill	low	low
Scott, Foresman	low	medium
SRA	high	high

Not to account for dialect differences is a major failure, one observed too often in the spelling series under review.

Spelling Content

There is a common core of content presented in spelling series in grades 1-4; that which is common to three or more (and generally four or more) of the series reviewed here is listed in the Appendix. This common core includes 95 sound-to-spelling correspondences, 8 suffixes, 6 suffixation processes, and 5 other matters (e.g., compounds, homophones). Of course, as is noted in Section I, the manner of teaching all of these materials varies considerably among series, particularly in the degree of specification and direct teaching and in the indication of environments. However, the Appendix provides an overview of what is commonly taught in spelling. It will be noted that most of this content is covered by corresponding spelling-to-sound correspondences in the SWRL Mod 2 Communication Skills Program (Berdiansky, Cronnell, & Koehler, 1969; Berdiansky, Stanton, & Cronnell, 1970).

Most series include the following kinds of content:

Simple-consonant correspondences (e.g., [b] → b; [n] → n);
Short-vowel correspondences (e.g., [æ] → a);
VCe correspondences (e.g., [ay] → i...e /__[C#]);
Other primary-vowel correspondences (e.g., [ay] → y /__#; [u] → u);
Consonant-digraph correspondences (e.g., [ŋ] → ng /__#; [š] → sh);
Double-consonant correspondences (e.g., [s] → ss /[V̆]__#);
Secondary-vowel correspondences (e.g., [i] → ee; [oy] → oy /__#);
Vowel-plus-consonant correspondences (e.g., [ayld] → ild;
[old] → old);

Unstressed-vowel correspondences (e.g., [ə] → a /#__; [i] → y /__#);
Silent letters (e.g., kn, wr);
Suffixes (e.g., -s, -ed, -ing);
Suffixation (e.g., e + ing; y → i + es);
Other (e.g., contractions, abbreviations).

The ordering of this material varies considerably from series to series even for single-consonant and short-vowel correspondences, which generally are among the first to be taught. The following indicates the variety of ways by which simple consonants (C's) and vowels (V's: $\breve{V}$'s = short vowels; $\bar{V}$ = long vowels; VV = secondary vowels) are introduced at the beginning of spelling instruction.[18]

1. C's + V's together

   a. C's + $\breve{V}$'s mixed: Lippincott, SRA
   b. C's + some $\breve{V}$'s; then remaining $\breve{V}$'s: Follett

2. C's; then V's[19]

   a. C's; then $\breve{V}$'s: McGraw-Hill
   b. C's; then V's [by letter: $\breve{V}$, (Vr), ($\bar{V}$Ce)]: Scott, Foresman

3. other: $\bar{V}$'s;[19] then C's + V's [$\breve{V}$, VV, $\bar{V}$Ce]: Economy

Either of the first two methods seems appropriate for introducing spelling instruction, although if (2) is used, there should be better control over other letters in the words used. It is interesting that the opposite of (2a) was not found, i.e., $\bar{V}$'s, then C's. Considering the apparent greater difficulty of short vowels, it might be useful to introduce them first for greater practice. However, the best method of beginning spelling instruction should be determined by experimental studies or by other constraints (e.g., when spelling is connected with reading, the reading program will, in part, determine spelling instruction).

Number of Sound-to-Spelling Correspondences

Table 1 lists the number of sound-to-spelling correspondences used per grade in each series. There is considerable variation in first grade: SRA has no spelling instruction; McGraw-Hill is limited to simple consonants; Follett introduces 51 correspondences. Otherwise,

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[18]This information was compiled by Donna Schwab.

[19]When consonants or vowels are introduced first, there appear to be no constraints on the other letters in the word.

TABLE 1

Number of Sound-to-Spelling Correspondences Per Grade Per Series[20]

	Grade 1	Grade 2	Total Grades 1 & 2	Grade 3	Grade 4	Total	Grand total (including miscellaneous correspondences)
Economy	36	46(13)	82(13)	6(10)	6(14)	94(37)	131
Follett	51	6(1)	57(1)	5	8	70(1)	71
Lippincott	29(1)	37	66(1)	17	4	87(1)	88
McGraw-Hill	19	38	57	18	8	83	83
Scott, Foresman	31	31(2)	62(2)	22(6)	5(15)	89(23)	112
SRA	--[21]	52	52	22(2)	14(13)	88(15)	103

[20]Compiled by Donna Schwab. Numbers in parentheses are miscellaneous correspondences found only in one or two series.

[21]The SRA series does not begin until Grade 2.

about 30 correspondences seem commonest in first grade. This is a reasonable figure, with about one correspondence per week.

By the end of second grade, an average of about 60 correspondences have been taught. However, after this point there are many fewer correspondences taught and a great deal of variation with from 71 to 131 correspondences presented through fourth grade. Economy may be overwhelming in number of correspondences; while they are good and well-ordered, they may present too much material for learning. Follett, on the other hand, starts off with a great deal in first grade and then neglects spelling instruction thereafter. The other series are much better balanced.

Exceptions

There are many exceptions to English rules and semi-rules for spelling, perhaps 5-10% of the lexicon, although the precise figure may vary according to the number of words and the type of spelling rules. In addition, in an ordered spelling program, regular words containing untaught rules must be viewed as exceptions for the learner. In considering exceptions in the series reviewed here, both true irregularities and untaught regularities are included. In fact, in some series it may be the latter type which may cause the most difficulty.

The relative frequency of exceptions in individual series is indicated as follows:

Economy	low	McGraw-Hill	high
Follett	very high	Scott, Foresman	high
Lippincott	medium-high	SRA	low

Where the frequency is high it is primarily because of introduction of words with untaught rules. Follett accomplishes this by list teaching, as does Scott, Foresman, to a lesser degree; McGraw-Hill tends to have poor organization and to be lax in sequencing.

A more serious problem may not be the absolute frequency of exceptions, but how they are taught. If exceptions are taught as exceptions, children can be clear as to the primarily regular nature of English orthography. If exceptions are not differentiated, then children will have greater difficulty in understanding and applying English spelling. John Holt (1970; p. 105) gives an example of the problems this may cause.

> This makes me think of the little girl--first grader? second grader?--who burst into tears the other day when her teacher told the class how to spell "once." The teacher probably assumed that the child cried because the word was so hard. The chances are that she cried because the word was so crazy,

> because it smashed into pieces the understanding that she had been carefully building up in her mind about the way words are spelled. Even then, she could probably have lived with this crazy word if only the teacher had troubled to point out that it was crazy. What really makes school hard for *thinkers* is not just that teachers say so much that doesn't make sense, but that they say it in exactly the way they say things that are sensible, so that the child comes to feel--as he is intended to--that when he doesn't understand it is his fault. (italics in original)

Most of the series reviewed here do make some note of exceptions. SRA most clearly indicates exceptions, by printing them on a red ("stop, beware") background. Lippincott is also generally good, although not always so clear. Both McGraw-Hill and Scott, Foresman have sections noting exceptions, but they also allow them in other, unnoted places. Economy generally notes exceptions, but in a much more casual and less obvious fashion. Follett is by far the worst offender in this regard: it has a high number of exceptions, none of which are noted.

Review

Because humans have a tendency to forget what is learned, review is generally important in an instructional program, whether it is part of on-going instruction or considered a separate learning experience. In addition, unless an instructional program is relatively individualized, review is important for newcomers to the program and for students who have missed part of the program. In the spelling series considered here there are two kinds of review to be noted: of material in previous grades and of material in the current grade.

Within-grade review. All series have "implicit review"; that is, when learning new material, old material is naturally included. For example, in a lesson on [æ] → a, if the word man is used, then the lesson contains implicit review--or preview, in some cases--of [m] → m and [n] → n. In addition, most series have explicit review in sections noted as such. (Exceptions are all of Follett, grade 1 of McGraw-Hill and grades 3 and 4 of Scott, Foresman; the later two series, however, have considerable review mixed into other lessons.) The most general pattern of explicit review is one review lesson after every 6 or 7 lessons in a 36-lesson book, for 5-6 review lessons a year (Economy, Lippincott, and McGraw-Hill). One series (SRA) has only two review lessons (midyear and final) out of 36. Scott, Foresman is not arranged into lessons (nearly every page is listed separately in the Table of Contents) and, although considerable review is included, it is difficult to quantify. The content and organization of Follett is so poor that review cannot be clearly separated out; there are no review lessons as such and apparently little concern for structured review.

Between-grade review. All series have considerable between-grade review, although it is generally not specified as such. In addition, some amount of review of previous grades may also introduce new, related material. In general, the amount of between-grade review increases each year, presumably because there is more prior material to review. Exceptions are Follett, where review is primarily in the "Skills training" section and where direct spelling instruction is minimal, and Scott, Foresman, where (as noted above) the arrangement makes review difficult to quantify. Table 2 indicates the amount of between-grade review in the other four series.

The primary content of between-grade review (and of all review) is vowel spellings. Particularly common is the introduction of short vowels in grade 1 and then review each year thereafter (even in grades 5 through 8, which are not considered here). It is also noticeable that as grade level increases, the amount of time devoted to review increases. For example, Economy, grade 4, with 29 lessons containing review of previous books and 5 lessons of within-grade review--which thus must often be review of review--leaves little opportunity for introduction of new material; this is generally true (although not so extreme) in all series. While such review often uses new and more difficult words, it seems excessive. There are three reasons why so much review may be used: (1) the authors of the series underestimate children's ability; (2) children lack ability to learn spelling; or (3) spelling is poorly taught. In light of most of the series considered here, the latter may well be the case, and better teaching of spelling could result in less need for review.

Dictionary use

Other than asking someone who knows, the primary source for the correct spelling of words is a dictionary. In order to use a dictionary as a source of correct spelling, a person must first have general dictionary-use skills (e.g, alphabetical order, guide words, etc.). Then he must know the pronunciation of a word and be able to construct a reasonable spelling to check in a dictionary. If this is incorrect, he must be able to continue constructing additional spellings until he finds the correct one. For example, if he is asked to write a [θim] and wishes to know how to spell the word (or find its meaning), he might progress as follows:

1. [θ] is always spelled th and [m] always contains at least m in its spelling, so the word contains the general shape th...m;

2. [i] can be spelled in many ways, the commonest being ee, so theem is looked up;

3. since theem is incorrect, the spelling ea or e...e for [i] is tried, and when the latter is looked up, the correct word theme is found.

TABLE 2[22]

Amount of Between-Grade Review by Series[23]

	Economy	Lippin-cott	McGraw-Hill	SRA
Grade 2				
Number of lessons reviewing grade 1	5	6	2	--[24]
Number of lessons reviewing grade 1 and presenting new material	9	0	0	--[24]
Total number of between-grade review lessons in grade 2	14	6	2[25]	--[24]
Grade 3				
Number of lessons reviewing grades 1 and/or 2	17	8	8	7
Number of lessons reviwing grades 1 and/or 2 and presenting new material	9	0	3	6
Total number of between-grade review lessons in grade 3	26	8	11	13
Grade 4				
Number of lessons reviewing grades 1 and/or 2 and/or 3	23	16	19	15
Number of lessons reviewing grades 1 and/or 2 and/or 3 and presenting new material	6	0	1	4
Total number of between-grade review lessons in grade 4	29	16	20	15

[22]Compiled by Donna Schwab.

[23]Each series has 36 lessons per grade.

[24]There is no grade 1 text for SRA.

[25]The small amount of review in McGraw-Hill book 2 is due to the small amount of content in book 1, which does not include vowels, the major source of review.

From the preceding paragraph, it can be seen that two factors influence the ease of finding words in a dictionary: (1) the regularity of the spelling, and (2) knowledge of the possibilities for sound-to-spelling correspondences. There is little that can be done about the first factor; thus instruction must focus on the latter.

What must a speller know in order to use a dictionary for correct spelling?[26] He should first of all know the most common spellings of all English sounds, and their degree of regularity. (For example, in the example above, [θ] is invariantly spelled th, so if theem is incorrect, it is not because of the first two letters.) Secondly, he should know what the alternative spellings are and what their relative frequencies are. With this knowledge, he can continue looking for the correct spelling, and, by using frequency considerations, can use his time most efficiently. (For example, the three major spellings of [i] in one-syllable words are ee, ea, and e(...e), in that order of descending frequency.) Finally, a speller must know what words are irregularly spelled. For such words a dictionary is of relatively little use because too much searching must take place; these words must be memorized. (For example, if a person wishes to spell [pipəl], he will waste his time looking under peep..., peap..., or pep..., although he may eventually find it under peop....)

This then is what must be known to make efficient use of a dictionary for establishing the correct spelling of words:

1. common spellings for all sounds, and their degree of regularity;
2. alternative spellings and their relative frequencies;
3. irregular words.

These three kinds of information can easily be incorporated into an instructional program. The proposals for the SWRL spelling component (Cronnell, 1970a) provide for the three types of information, in general, by rules, semi-rules, and sight words, respectively.

Dictionary use is included in many spelling programs; of the series reviewed here, only Economy and Follett ignore dictionaries. Lippincott, McGraw-Hill, and SRA teach general dictionary-use skills. SRA emphasizes the use of a dictionary for determining correct spelling, in ways similar to that outlined above. While Scott, Foresman has excellent reference materials for spelling, their use is not taught in the series.

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[26]To "know" anything suggested here may or may not mean to be conscious of it and able to verbalize it; whether such direct knowledge is useful should, however, be investigated.

Three areas of knowledge have been noted above as important for efficient use of a dictionary for establishing the correct spelling of words. When spelling series present such information students should be better able to use their dictionaries. While most series give common spellings for all sounds, many are lax on indicating their degree of regularity. Alternative spellings and their relative frequencies are treated with varying degrees of thoroughness, as noted in the reviews in Section I and in the discussion of content earlier. Individual series also vary as to the effective teaching of irregular words (see the discussion of exceptions above).

Writing

Spelling is essentially a writing skill, although writing instruction need not be part of a spelling program. All the series provide lined spaces and clues for handwriting in grades 1 and 2; this is probably necessary for beginning writers. In addition, explicit handwriting instruction is included in four series: Follett, Lippincott, McGraw-Hill, and Scott, Foresman. While the purpose of learning to spell is to write words in connected writing, instruction in written discourse is not necessary for a spelling program. McGraw-Hill and Scott, Foresman include connected writing in their spelling series; Follett, as noted in Section I, places considerable emphasis on writing.

Pedagogy

In this study, method was generally not investigated as much as content; however, some note was taken of pedagogy. This section will report some of the observations made.

Unlike reading instruction, spelling instruction may be done--to a great extent, if not wholly--by students working alone. This is especially true if the students can read well (and/or if there are instructional recordings for them, which is not true of any of the series reviewed here). All the series include directions to teachers on how to teach the lessons, with the relative amount of such information indicated as follows (quality was not judged):

Economy	high	McGraw-Hill	medium
Follett	high	Scott, Foresman	low
Lippincott	high	SRA	medium

However, the amount of pedagogical information does not correlate with the amount of possible individual student work, except for Economy, which is so structured that students are unable to use much of their text without teacher direction. The other five series are usable without teacher direction, although in most cases teacher assistance can add to the value of the series.

Since spelling depends on analysis of the English sound system, auditory training may be useful. This is found only in Economy, Lippincott, and McGraw-Hill. Another feature which may be useful is pronunciation symbols, which can be used as cues and aids to spelling. The following four series use them (grade of introduction noted in parentheses):

Economy (3)	Scott, Foresman (2)
Follett (4)	SRA (4)

Good spelling instruction should transfer to words not explicitly included for learning. All the series have some kind of transfer in their lessons (as "skill development," "extension," "enrichment," or whatever). However, only SRA tests for transfer, which provides a means of assessing spelling knowledge.

Number of words used

The number of words used in each series in grades 1-4 is summarized in Table 3. (They are treated in somewhat greater detail for each series in the reviews in Section I.) These figures were compiled from frequencies given in the series or in publishers' brochures, or from counts of word lists included in the series, or in one case (Scott, Foresman, Book 4) from counts of words in lessons. Because of the variety of sources, frequencies from different series may not be comparable. In addition, each series may treat "basic" and "other" words (as well as "supplementary" words) in different ways. (For example, Scott, Foresman is the only series to have "other" words in grade 1, but the total is comparable to those of other series.)

As would be expected, the number of words per year increases with grade, although there appears to be some falling back or slowing down in grade 4. After four years of spelling instruction, children have been exposed to an average of about 2000 words.

Conclusion

Six commercial spelling series were reviewed individually, and comparisons were made among them. While there is a "common core" of spelling content in all series, there is considerable variation in the treatment of this common content and in the additional material included. Major variations are in linguistic orientation, explicitness of spelling instruction, accuracy of presentation, and handling of exceptions. It should also be noted that these series are not generally related to reading instruction; while this independence from reading allows greater freedom for spelling instruction, it does not permit a unified communication skills program. A spelling program which utilizes the best features of the series reviewed here and which grows from a competent reading program should provide an excellent basis for learning the sound-to-spelling correspondences of English, within a unified communication skills program.

TABLE 3

NUMBER OF WORDS USED IN EACH SERIES IN GRADES 1-4

	Grade 1			Grade 2			Grade 3			Grade 4			Grand Total		
	Basic	Other	Total	Basic	Other	Total	Basic	Other	Total	Basic	Other	Total	Basic	Other	Total
Economy[27]	142	---	142	274	196	470	365	211	576	454	458	912	1235	865	2100
Follett[27]	190	---	190	240	72	312	600	108	708	600	108	708	1630	288	1918
Lippincott[27]	101	---	101	265	260	525	360	319	679	450	285	735	1176	864	2040
McGraw-Hill[27]	144	---	144	256	237	493	350	284	634	561	158	719	1311	679	1990
Scott, Foresman[27]	50	69	119	130	384	514	353	716	1069	271[28]	274[28]	545[28]	804	1443[28]	2247[28]
SRA	---[29]	---[29]	---[29]	351	---[30]	351	426	---[30]	426	460	213	673	1237	213[30]	1450
Mean for all Series	125[31]	---[32]	139[31]	253	230[31]	463[31]	409	328[31]	733[31]	466	249	715	1232	828[31]	2059[31]

[27]Frequencies include words from previous levels.

[28]Frequencies for Grade 4 not given in Scott, Foresman; count made by author (BAC) may be too low.

[29]The SRA series does not begin until Grade 2.

[30]No frequencies given for "other" words in SRA Grades 2 and 3.

[31]Excluding SRA.

[32]Too few series to determine mean.

APPENDIX

Presentation of Correspondences[1] and Other Material by Grade in Spelling Series[2]

	Example	Economy	Follett	Lippincott	McGraw-Hill	Scott, Foresman	SRA[3]	SWRL[4]
Simple consonants[5]								
[b] → b	boy	1	1	1	1	1	2	FY
[d] → d	bad	1	1	1	1	1	2	FY
[f] → f	fat	1	1	1	1	1	2	FY
[g] → g	get	1	1	1	1	1	2	FY
[h] → h	had	1	1	1	1	1	2	FY
[j] → j	jet	1	1	1	1	1	2	FY
[l] → l	lot	1	1	1	1	1	2	FY
[m] → m	man	1	1	1	1	1	2	FY
[n] → n	man	1	1	1	1	1	2	FY
[p] → p	pat	1	1	1	1	1	2	FY
[r] → r	run	1	1	1	1	1	2	FY
[s] → s	sing	1	1	1	1	1	2	FY
[t] → t	lot	1	1	1	1	1	2	FY
[v] → v	vest	1	1	1	1	1	2	FY
[w] → w	wet	1	1	1	1	1	2	FY
[ks] → x	box	1		1	2	2	3	FY
[y] → y	yarn	1	1	1	1	1	2	FY
[z] → z	zoo	1			1		2	FY
∅ → e /v__#	have	2		1		3	4	FoY

[1]Correspondences, while listed in rule form in this table, are not necessarily taught as rules in each series; in particular, environments are often not defined.

[2]Compiled by Donna Schwab.

[3]The SRA series does not begin until Grade 2.

[4]Year of appearance of corresponding spelling-to-sound correspondence in reading component of SWRL Model 2 Communication Skills Program (Berdiansky, Stanton, & Cronnell, 1970).

[5]Categories defined generally in terms of responses (i.e., letters) or letter-sounds (e.g., short vowels).

	Example	Economy	Follett	Lippincott	McGraw-Hill	Scott, Foresman	SRA	SWRL
[ǰ] → g /V__e	page	3		2		2	4	SY
[ǰ] → g	gem	4	3		4	2		SY
[k] → c /__{a, o, u, C}	cat, cot, cut, crab	1	1	1,2	1	1	2	FY
[k] → k /__{e, i}	keep, kill	1	1	1,2	1	1	2	FY
/{[V̄]__#, C__#}	lake, leak, ask							
[s] → c /V__e	face	2	3	3	3	2	4	SY
[s] → c	cell	4	3	3	3	2	3	SY
[z] → s /V__e	rose	1		3	3		2	TY
[z] → s	is	1		1	3	2		ir[6]
Short vowels								
[æ] → a	had	1	1	1	2	1	2	FY
[ɛ] → e	jet	1	1	1	2	1	2	FY
[ɪ] → i	sing	1	1	1	2	1	2	FY
[a] → o	lot	1	1	1	2	1	2	FY
[ə] → u	run	1	1	1	2	1	2	FY
VCe								
[e] → a...e /__[C#]	lake	1	1	2	2	1	2	SY
[ay] → i...e /__[C#]	mile	1	1	2	2	1	2	SY
[o] → o...e /__[C#]	hole	1	2	2	2	1	2	SY
[(y)u] → u...e /__[C#]	mule, June	1	4		3	2	3	SY

[6]Found in irregularly-spelled words.

	Example	Economy	Follett	Lippincott	McGraw-Hill	Scott, Foresman	SRA	SWRL
Other primary vowels								
Long vowels								
[i] → e /__#	he	2	4	2		2	2	FY
[ay] → y /__#	by	2		1	2	2	2	FY
[o] → o /__#	go	2		1	2	2	2	FY
Other								
[ə] → o (stressed)	son	2	1		2	3	2	SY
[u] → u	put	2			3	3	2	SY
[ɔ], [a] → o (dialect)	song	2			2	3	2	SY
Vowels plus r								
[ar] → ar	yarn	2	1	2	3	1	2	SY
[or] → or	born	2	1	2	3	2	3	SY
[ər] → er	her, father	2	2	2	2	2	3	SY
[ər] → ir	third	2	1	3	2	2	3	SY
[ər] → ur	burn	2	3	3	2	2	4	SY
[ər] → or /w__C	word	2		2	2	3	4	SY
Consonant digraphs								
[č] → ch	chill	2	1	3	2	1	2	SY
[č] → tch /[v̆]__#	witch	3		3	3	3	4	SY
[f] → ph	graph	4		4	4	3		TY
[f] → gh	laugh	4		4	4	3		ir
[ǰ] → dge /[v̆]__#	judge	4	4	4			3	SY
[k] → ck /[v̆]__#	kick	2	1	2	2	1	3	FY
[kw] → qu	quick	1	4	4	4	2	4	SY
[ŋ] → ng /__#	sing	2	1	3	2	2	2	SY
[ŋ] → n /__k	sink	2	1	3		2	2	FY

	Example	Economy	Follett	Lippincott	McGraw-Hill	Scott, Foresman	SRA	SWRL
[š] → sh	ship	2	1	1	2	1	1	FY
[θ] → th	thing	2	1	2	2		2	FY
[ð] → th	them	2	1	2	2	2	2	FY
[hw], [w] → wh (dialect)	when	2	1	2	2		2	SY
Double consonants								
[f] → ff /[V̆]__#	stuff	2		2			2	FY
[l] → ll /[V̆]__#	fill	2	1	2	2	1	2	FY
[s] → ss /[V̆]__#	mass	2	1		3	2	2	FY
[C] → CC /[V̆]__[V]	happen	2		3		4	3	SY
Secondary vowels								
[i] → ee	tree	1	1	2	2	2	2	FY
[i] → ea	leak	1	1	2	2	2	4	SY
[ɛ] → ea	head	2	3	2	3	3	4	SY
[aw] → ow /__(n)#	cow, town	2	1	2	2	3	3	SY
[aw] → ou	out	2	1	2	2	3	3	TY
[ɔ], [a] → aw /__# (dialect)	saw	2	4	2	4	3	2	TY
[ɔ], [a] → au (dialect)	vault	3		2	4	3	4	TY
[oy] → oy /__#	boy	2	1	2	2	3	3	TY
[oy] → oi	join	2	4	2	4	3	3	TY
[u] → oo	look	2	1	2	2	2	2	SY
[u] → oo	moon	2	1	2	2	2	3	SY
[(y)u] → ue	true	2		3		2		TY
[(y)u] → ew /__#	few, new		2	3		2	4	TY
[ay] → ie /__#	lie	2		2	3	2		TY
[ay] → igh	sigh	2	1	3	3	2	4	TY

	Example	Economy	Follett	Lippincott	McGraw-Hill	Scott, Foresman	SRA	SWRL
[o] → ow /__#	low	2		2	2	2	2	SY
[o] → oa	boat	1	2	2	2	2	3	TY
[e] → ay /__#	say	2	1	2	2	2	2	SY
[e] → ai	rain	1	2	2	2	2	3	TY
Vowel plus consonant combinations								
[ɔl] → all	fall	2	1	2	2	3	2	SY
[ɔk] → alk	walk	3			3	3	3	TY
[ayld] → ild	mild	3		2		3	2	SY
[aynd] → ind	kind	3		2	3	3	3	SY
[old] → old	sold	2	1	2		3	3	SY
Unstressed vowels								
[əl] → le	little	2		3	3	4	3	SY
[ə] → a /#__	about	2	2		3	4	3	SY
[i] → y /__#	happy	2	4	3	2	4	2	SY
[ə] → a, e, i, o, u	extra, happen, pencil, person, circus	4				4	4	SY
Silent letters								
kn ([n] → kn)	knee	2	2	3	4	3	3	TY
wr ([r] → wr)	write	3	4	3	3	3	4	TY
Suffixes and suffixation								
-s	cats	1	1	2	2	3	2	FY
-es	boxes	4	3	3	3	3	3	SY

	Example	Economy	Follett	Lippincott	McGraw-Hill	Scott, Foresman	SRA	SWRL
-ing	singing	2	1	3	2	3	2	SY
∉ + ing	hoping	2	2	3	3	3	2	SY
C + Cing	getting		2	3	3	3	3	SY
-ed	played	3	1	3	2	3	2	SY
∉ + ed	liked	3	2	4		3	3	SY
C + Ced	patted		2	4		3	3	SY
y → i + es	tries	3	2	3	3	3	4	[7]
y → i + ed	cried	3						[7]
-er	faster	4	2	2	2	4	3	SY
-est	biggest		3	3	3	4	3	SY
's	boy's	4	3	3		3	4	[7]
-ly	slowly	3	3	4		3	3	SY
Other								
compounds	fishpond	2	3	2	3		2	SY
homophones	to-too-two		2		2	2	3	[7]
contractions	can't	3	3	3	3	3	4	[8]
abbreviations	Mrs.	3			3	4	3	[8]
syllabication	hap-pen	2	1		2			[7]
etymology				2	4	4		[7]

[7]Not explicitly included in SWRL.

[8]See Cronnell (1970b).

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